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January 16, 1940

S
Control-Insect
Annual Report
C. Y. 1939

Chief,
Forest Service,
Washington, D. C.

Dear Sir:

The annual reports from the Forest Supervisors, reports from individual forest officers and a report by Dr. J. A. Beal, entomologist from the Forest Insect Laboratory, Fort Collins, Colorado, have been summarized to present a picture of fore t insect conditions in the Region for the year 1939.

BARK BEETLES
(Dendroctonus and Ips)

The annual reports from the forests show conditions normal as to bark beetle damage on the following forests of the Region: Apache, Carson, Cibola, Coronado, Crook, Gila, Lincoln, Santa Fe, Sitgreaves and Tonto. The Coconino and Kaibab Forests reported considerable killing in groups of reproduction of pole sizes and some large reserved trees on the current cutting areas of the Arizona Lumber & Timber Company and the Saginaw & Manistee Lumber Company timber sale areas. The groups of trees on the Saginaw & Manistee Lumber Company sale area located on the Williams Division of the Kaibab were examined and reported on by Ranger David C. Scott of that forest and the groups on the Arizona Lumber & Timber Company sale area located on the Coconino were examined and reported by Mr. Belton from the Regional Office. On both areas it was found that groups of saplings and poles, as well as the tops of some of the seed trees, had been killed. Ips oregoni Eichh. appeared responsible for the killing of the tops. Ips integer Eichh. and Dendroctonus barberi Hopk. were found in the lower trunks of dying and recently killed trees on both areas. Control work on these areas was not recommended as the Ips appears to be the primary insect causing the damage.

RCS/asg

The Kaibab North Division of the Kaibab Forest was examined by Dr. J. A. Beal, Entomologist, accompanied by Ranger Scott of the Kaibab and Salton of this office, spending two days early in June, and the area was again examined by Dr. F. C. Craighead on August 4 and 5. No indication of an increase of Dendroctonus ponderosae Hopk. was found. Dr. Craighead in his report stated: "During these days we covered several hundred miles of road and examined many red tops, both on the forest and on the Park, including Greenland Plateau. No infestation was observed anywhere and no red top trees showed any broods of the Black Hills beetles". Dr. J. A. Beal in his report stated: "Although the North Rim area was not examined with the same thoroughness as last year, I am confident that we saw enough of the forest to be reasonably certain there is very little present damage by insects."

The Prescott reports heavy insect damage to ponderosa pine in the Horsethief Basin recreational and adjacent areas on the Crown King District. This area was examined by Dr. J. A. Beal, Entomologist, during the first of June, 1939. The most common insects found by Dr. Beal in the groups of dying and dead trees of this area were D. arizonicus Hopk., D. barberi Hopk., D. approximatus Dietz, and Ips lecontei, Sw. A general examination of the area was made later in November, 1939, by Salton of this office and Assistant Supervisor McNelty of the Prescott, from the Horsethief Basin Firetower and high points overlooking the area. Several red top trees were checked and found to have large broods of Dendroctonus in them. This examination showed an increase in number of dying and dead groups of trees scattered throughout the Horsethief Basin proper and adjacent areas to the extent that control work was recommended to be carried out during the winter and spring of 1940. The Copper Basin Road area was also examined early in June, 1939, by Dr. J. A. Beal. The same insects as in the Horsethief Basin area were found to beekilling ponderosa pine here. Control work was done on this area during April, 1939. The area was checked over late in November, 1939. The control work appeared to have been successful in controlling the damage. There were a few groups of trees which had been killed this year along the high ridge which forms the south and west boundary of the area. Follow-up control work to treat these groups was recommended, this follow-up work to be accomplished with men from the CCC Fairground Camp at Prescott. The report on insect control done on this area during April, 1939, follows:

Year: 1939
Project Name: Copper Basin Road Unit
Forest: Prescott
Duration of Project: April 1 to April 30, 1939
Tree Species Affected: Ponderosa pine
Insects responsible: D. arizonicus Hopk., D. barberi Hopk.
D. approximatus Dietz, and Ips lecontei, Sw.
Total Acreage Involved: 750 acres

Method Followed: Trees felled, bark peeled from infested area on stems and burned.
Number of trees spotted: 409 from 6 to 30 inches d.b.h.
Number of trees treated: 409 from 6 to 30 inches d.b.h.
Expenditures from project funds (CCC) direct costs - $436.50
Expenditures contributed time and expenses 8.88
Total cost of project 445.38
Total cost per tree 1.06
Percent of reduction obtained - 90%
Number of man days used - 261 CCC man days; and 1 foreman - 26 days.
Results: Successful control.

Damage in the Douglas fir type on the Carson and Santa Fe Forests caused by the Douglas fir beetle (Dendroctonus pseudotsugae Hopk.) appears about the same as last year and was classified by Dr. J. A. Beal as only mildly epidemic. No control work is recommended for these areas.

TIP MOTH

Damage by tip moths in ponderosa pine was reported from the Apache, Carson and Coconino Forests. Damage by tip moth was noted on the Cibola, Lincoln, Kaibab, Santa Fe, Sitgreaves and Tonto Forests by Salton. The damage by these insects during 1939, was normal and appears to have decreased from that of 1938.

SPRUCE BUDWORM
(Cacoecia fumiferana Clems)

Damage by the spruce budworm is reported normal and a decrease from that of 1938, by the Carson, Coconino and Santa Fe Forests.

GREAT BASIN TENT CATERPILLAR
(Malacosoma fragilis Stretch)

The Carson and Santa Fe Forests on which the tent caterpillars were most destructive in the aspen report the infestations have greatly decreased and conditions are normal, except for a few isolated small areas. The other forests report the tent caterpillar damage as normal. Thie tent caterpillar was found in abundance feeding on oak brush and other broad-leaf shrubs and trees on the Sitgreaves and Tonto Forests late in May. The damage to these species appears slight.

FALL WEBWORM
(Hyphantria cunea Drury)

The Lincoln and Gila Forests report infestations of the fall webworm (Hyphantria cunea Drury) in the native walnut. Specimens were collected and forwarded to the Forest Laboratory, Fort Collins, Colorado for identification and information on damage to be expected from these insects. Very little damage to be expected from them, according to the Laboratory report.

CONE WEEVILS

The Coconino Forest reports that cone weevils have practically destroyed the pinon nut crop this year. It has been noted that the cone weevil or borer destroys a part of the ponderosa pine seed crop each year throughout most of the ponderosa pine type in this Region.

MATSUCOCCUS SCALE

Specimen twigs of damaged pinon were forwarded from the Gila and Cibola Forests to the Forest Insect Laboratory at Fort Collins for study and identification of the insects doing the damage. The report from the Laboratory showed the cause of the damage to be that of a scale insect - Matsucoccus acalptus Herbert. The damage to date has not been severe enough to kill the infested trees.

The study of the Matsococcus scale by the Bureau of Entomology was completed during the summer of 1939. The Bureau of Pathology has completed its study of the so-called twig blight. The check of the study plots shows a decrease in some areas and an increase in other areas, but does not show the intensity as the records are only by trees and not by individual twigs. The general observation of the blight condition indicates for this year a decided decrease in twigs killed and no spread of the blight to new areas.

Very truly yours,

FRANK C. W. POOLER
Regional Forester

By: George W. Kimball Acting

above normal. The insects doing the damage are Dendroctonus barberi and Ips; (2) Groom Creek area and Hassayampa River on the Prescott Ranger District where most of the killing is in groups along the south and east sides of the river; (3) an area on Crown King Ranger District in Horse Thief Basin where there are two or three groups of trees which have been killed during the past couple of years.

No control work has been done during the past year; however, the Supervisor expected to do a limited amount of control work with CCC enrollees on the groups of trees within the Prescott and Camp Wood areas, and possible, if weather conditions permit, in the Horsethief Basin area.

Tonto Forest

The Tonto Forest reported a small infestation in the Sierra Ancha Mountains in early October. An examination of the area showed that some timber had been killed by Dendroctonus and Ips. The timber stand consists of a large percent of overmature trees and the younger trees of the stand are heavily infected with mistletoe. At the time of the examination very few beetles were found and the infestation appeared to be on the decline. The ranger on the Sierra Ancha District has been instructed to make an examination of this area next spring and make a report of his findings.

Kaibab Forest

Dr. J. A. Beal, entomologist, visited the Kaibab Forest during August and spent a couple of days in an examination of the northern division of the Kaibab and along the Grand Canyon National Park Boundary. His report which was furnished your office on September 9, 1938, shows that there is no cause for alarm at present on the Kaibab.

Very truly yours,

FRANK C. W. POOLER,
Regional Forester

By: Acting
MORTON M. CHENEY